

WATER PROTECTION BUREAU

Agency Use

Permit No.:

MTG 010164

Date Rec'd

2/3/9

Amount Rec'd

Check No.

Rec'd By

CB

FORM  
NMP

## Nutrient Management Plan

**READ THIS BEFORE COMPLETING FORM:** Before completing this form (Form NMP), Concentrated Animal Feeding Operation (CAFO) operators need to read the General Permit, particularly Part IV.A. CAFO operators also need to read the "Instructions For Filling Out Form NMP," found at the back of the Form. Form NMP is intended to help CAFO operators develop a site-specific Nutrient Management Plan, in compliance with Part IV.A of the General Permit and all applicable State rules and statutes. Your Nutrient Management Plan must be maintained at the site as required in Part III of the General Permit. Sections B and C on your Form NMP must state the information exactly the same way as it was stated on the most recently submitted version of your Form 2B. Attach additional pages as necessary, indicating the corresponding section number on this NMP form. For additional help in filling out this form please read the attached instructions. The 2008 General Permit, current fee schedule, and related forms are available from the Water Protection Bureau at (406) 444-3080 or <http://www.deq.mt.gov/wqinfo/MPDES/CAFO.asp>

### Section A - NMP Status (Check one):

- ☒ New No prior NMP submitted for this site.  
☐ Modification Change or update to existing NMP.

Permit Number: MT G 010164 (Specify the permit number that was previously assigned to your facility.)

### Section B - Facility or Site Information:

Site Name Camrose Colony  
Site Location Sec. 33-30N-1E  
Nearest City or Town Ledges Mt, 59456 County Toole

### Section C - Applicant (Owner/Operator) Information:

Owner or Operator Name George J. Waldner for Will R. H. B. Sasser  
Mailing Address 26 Camrose Lane  
City, State, and Zip Code Ledges Mt, 59456  
Phone Number (406) 627-2490 ext 614

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## Section D - NMP Minimum Elements:

### 1. Livestock Statistics *Additional Animals See Section D 1.1 Page 2.1*

Animal Type and number of animals	# of Days on Site (per year)	Annual Manure Production (tons, cu. yds. or gal)
1. Dairy Milk Cows 90	365	*
2. " " " 60	365	**
3. " Heifers 55	365	**
4. " Dry Cows 40	365	**
5. " Steers 120	365	**
6. " Calves 105	365	**
7. Gestating Sows 310	365	*
8. Lactating Sows 60	365	*

Method used for estimating annual manure production:

*Generated using Purdue University Manure Management Planner Program*  
 \* 3,800,000 gallon total produced from application from previous years  
 \*\* 3500 tons total produce from application from previous years

### 2. Manure Handling

Describe manure handling at the facility:

*Dry manure hauled to a place that was picked by members of the colony & approved by the Town County NRCS People. Liquid manure is pumped into holding lagoons & hauled 2 times a year Spring & Fall.*

Frequency of Manure Removal from confinement areas: *every 6 to 10 weeks*

*Cornals & feed lots are cleaned 6 to 10 weeks, also layers & pulled manure, hauled to dry stack pile weekly. Hogs pigs every 2-4 weeks into Stage 1 Lagoon. Depending on Volume of pit. Dairy Pit Pumped Weekly.*

Is this manure temporarily stored in any location other than the confinement area? ☒ Yes ☐ No

If so then how and where? *hauled to dry stack pile till its transferred to fields.*

Is manure stored on impervious surface? ☐ Yes ☒ No

If yes, describe type and characteristics of this surface:

*Stored on grass, but have a site picked for storage. Controls will be poured (with sides) to hold dry manure in place.*

# Section D 1.1

Animal Type and number of animals	# of Days on Site (per year)	Annual Manure Production (tons, cu.yds. or gal)
9. <i>Hogs Boars 20</i>	<i>365</i>	<i>*</i>
10. <i>" Nursing 600</i>	<i>365</i>	<i>*</i>
11. <i>" Growers 1040</i>	<i>365</i>	<i>*</i>
12. <i>" Pre Grower 1200</i>	<i>365</i>	<i>*</i>
13. <i>" Finishers 960</i>	<i>365</i>	<i>*</i>
14. <i>Layers 8000</i>	<i>365</i>	<i>**</i>
15. <i>Pullets 4500</i>	<i>300</i>	<i>**</i>
16. <i>Broilers 1200</i>	<i>250</i>	<i>**</i>
17. <i>Duck 300</i>	<i>84</i>	<i>**</i>
18.		
19.		
20.		
21.		

*\* 3,800,000 gallon total produce from application from previous years*  
*\*\* 3,500 ton total produce from application from previous years*

### 3. Waste Control Structures

Waste Control Structure (name/type)	Length (ft)	Width (ft)	Depth (ft)	Volume (cubic ft or gallons)
1. 1st Stage Lagoon (11g.)	128	128	18'	868,159 gal
2. 2nd Stage Lagoon (12g.)	348	188	8	3188 346 gal.
3. Dairy Pit.	65	8	7	27 300 gal.
4. Hog Gestating 5 pits	100	8	2	60,000 gal
5. " Farrowing 9 pits	48	8	2	51 840 gal
6. " Nursery 16 pits	50	7	2	84 000 gal
7. " Feeders 34 pits	40	5	2	102,000 gal
8. " Quarantine 2 "	60	5	4	18,000 gal
9. Dry Stock Pile	135	100	8'	92,000 cu ft.
10.				
11.				
12.				

### 4. Disposal of Dead Animals

Describe how dead animals are disposed of at this facility:

Buried on site, & covered with dirt. Buried within hours of death. Meets DEQ Circular 9 criteria  
10ft hole dug with backhoe, for burial of dead animals.

### 5. Clean Water Diversion Practices

Describe how clean water is diverted from production area:

Rain gutters, underground piping.

Drainage strips, working with NRCS to approve to their specs.

Backfilled & Raised where it required.

See Animal Waste Facility Map for locations and extents (Plan View Map.)

## 6. Prohibiting Animals and Wastes from Contact with State Waters

Describe how animals and wastes are prohibited from direct contact with state waters:

animals are kept in Corals,  
feed that are in pasture during Summer months,  
Drink fr Plastic Tanks that Filled fr Hydrant, that  
Was Put there for that specific Purpose.

## 7. Chemicals and Contaminants

Describe how chemicals and other contaminants are handled on-site:

Kept in different area, 1/2 mile fr Livestock.  
Kept in Sealed Containers,  
Locked in a building, & brought out in small quantities only.

## 8. Best Management Practice (BMPS)

Describe in detail all temporary, permanent and structural Best Management Practices (BMPs) which will be used to control runoff of pollutants from facility's **production area**. Indicate the location of these measures. Include a schedule for implementation of each of these measures. Examples of BMP measures could include but are not limited to: constructing ditches, terraces, and waterways above an open lot to divert clean water run on; installing gutters, downspouts and buried conduits to divert roof drainage; providing more roofed area; decreasing open lot surface area; repairing or adjusting water systems to minimize water wastage; using practical amounts of water for cooling purposes; recycling water if practical and applicable.

Rain Gutters, better than direct drainage, underground  
Piping. Will be providing Grass strips Working with  
Toole County ~~and~~ on this Project, to further improve.  
See Facility NRCS design map scheduled for 2009.  
(Plan View Map)

Describe in detail all temporary, permanent and structural Best Management Practices (BMPs) which will be used to control runoff of pollutants from facility's **land application area**. Indicate the location of these practices. If not already in use, include a schedule for implementation of each of these measures. Attached details and specifications may be used to supplement this description. Examples of BMP measures could include but are not limited to: maintaining setbacks from surface waters for manure applications; managing irrigation practices to prevent ponding of wastewater on land application sites; never spray irrigating wastes onto frozen ground; consulting with the Department prior to applying any liquid waste to frozen or snow-covered ground; applying wastes at agronomic rates.

Plant sampling/tissue analysis	yes/no	Rotational grazing	yes/no
Conservation or reduced tillage	yes/no	Manure injection or incorporation	yes/no
Terraces or other water control structures	yes/no	Contour plantings	yes/no
Riparian buffers or vegetative filter strips	yes/no	Winter "scavenger" or cover crops	yes/no

Other examples Worked with NRCS agent, & she provided setbacks, & boundaries on every field, to keep manure from entering any slopes or ditches, as its kept away from coulees. See Topo map.

### 9. Implementation, Operation, Maintenance and Record Keeping – Guidance

The permittee is required to develop guidance addressing implementation of NMP, proper operation and maintenance of the facility, and record keeping as described in Part II of the permit.

Has a guidance document been developed for the facility? ☒ Yes ☐ No

Certify the document addresses the following requirements:

Implementation of the NMP:	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Facility operation and maintenance:	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Record keeping and reporting:	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Sample collection and analysis:	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Manure transfer:	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

Provide name, date and location of most recent documentation:

NRCS CNMP developed for Colony in Fall 07  
updated 11-08. Manure Analysis 11-08, Soil Samples 10-08  
Located in Plumber shop.

If your answer to any of the above question is no, provide explanation

No manure is transferred off the farm

## Section E – Land Application

Will manure be land applied to land either owned, rented, or leased by the owner or operator of the facility?

- ☐ No If no, then provide an explanation of how animal waste at this site are managed.  
☒ Yes If yes, then the information requested in Section E must be provided.

Narrative Manure Application Plan All Field treated as demonstrated

### Photos and/or Maps

Attach an aerial photograph or map of the site where manure is to be applied. (Use multiple photos/maps if necessary to show required details.) The photo(s)/map(s) must be printed on no larger than an 11"x17" piece of paper, and must clearly identify the following items:

- Individual field boundaries for all planned land application areas
- A name, number, letter or other means of identifying each individual land application field
- The location of any down-gradient surface waters
- The location of any down-gradient open tile line intake structures
- The location of any down-gradient sinkholes
- The location of any down-gradient agricultural well heads
- The location of all conduits to surface waters
- The specific manure/waste handling or nutrient management restrictions associated with each land application field.
- The soil type(s) present and their locations within the individual land application field(s)
- The location of buffers and setbacks around state surface waters, well heads, etc.

### Land Application Equipment Calibration

Describe the type of equipment used to land apply wastes and the calibrating procedures:

7500 Gal Tanker Truck, 7200 Gal Pull Type Slurry Tank.

2-describe

1. Manure Spreader 16 tons Capacity (Rented) Truck mounted

### Manure Sampling and Analysis Procedures

A representative manure sample will be analyzed a minimum of once annually for Total Nitrogen, and Total Phosphorus. Analysis results will be reported in lbs/ton or lbs/1,000 gal. Results of these analyses will be used in determining application rates for manure, litter, and process wastewater.

Manure Sample collection will occur according to the following method:

- ☒ The recommended method(s) found in Section 5 of Department Circular DEQ 9  
☐ Other (describe) \_\_\_\_\_

### Soil Sampling and Analysis Procedures

A representative soil sample from the top 6 inch layer of soil in each field will be analyzed for phosphorus content at least once every five years. Analyses will be conducted by a qualified laboratory, using the Olsen P test. Results will be reported in parts per million (ppm) and will be used in determining application rates for manure, litter, and process wastewater.

Soil sample collection will occur according to the following method:

- ☒ The recommended method(s) found in Section 5 of Department Circular DEQ 9  
☐ Other (describe) \_\_\_\_\_

**Land Application Data-Narrative approach**

The following must be filled out for each field to which manure, litter or process wastewater will or may be applied for the period of the permit (5 years). Use as many sheets as necessary to fulfill this requirement. **Fields with identical crops and soil types may be grouped together.**

**Crops and Manure**

**Field Name and spreadable acres for each (for fields with identical crops and soils type):**

Subfield 4 100 ac Crop 1 - Barley

Subfield 24 153.7 ac Crop 2 - Wheat

<b>Crop 1 (year 1 or ?) plant species</b>	Barley (Feed)
Irrigated (Y/N)	N
Yield Goal (ton/ac or bushel/ac)	50 bu.
N Content of soil as nitrate (lbs/acre or ppm)	33 lbs 0-24" Field 4
P Content of soil as P <sub>2</sub> O <sub>5</sub> (lbs/acre or ppm)	14 PPM
Time of Year When Application will Occur (month)	Sept
Application frequency (per year by month)	1 time per year
Form of manure (liquid/solid)	Liquid
Method of Application	Tank Sprayer
Is manure incorporated or broadcast?	Not incorporated
Frequency of Application (yearly, biannual, etc.?)	once a year
<b>Crop 2 Subfield 24</b>	Wheat
Irrigated (Y/N)	N
Yield Goal (ton/ac or bushel/ac)	55
N Content of soil as Nitrate (lbs/acre or ppm)	49 lbs NO <sub>3</sub> 0-24" Field 20
P Content of soil as P <sub>2</sub> O <sub>5</sub> (lbs/acre or ppm)	21 PPM
Time of Year When Application will Occur (month)	Sept
Application frequency (per year, by month)	1 time per year
Form of manure (liquid/solid)	Solid
Method of Application	Manure Spreader
Is manure broadcast, injected or incorporated?	Broadcast Incorporated
Frequency of Application (Annual, Biannual, etc?)	once 2 yr

## Phosphorus Risk Assessment

The permittee shall assess the risk of phosphorus contamination of state waters. An assessment shall be conducted for each field, under the control of the operator, to which manure, litter or process wastewater will or may be applied. If a new field is added in the future, then the permittee must submit a revised (modified) NMP. The permittee has the option of using either Method A or Method B (below) to complete the assessment. Copies of all tables and calculations used to complete the assessments, as well as the results of the assessments, shall be submitted to the Department and copies shall be maintained on-site at the facility and available for Departmental review. The results of the assessments shall be used to determine the appropriate basis for land application of wastes from the facility.

### Method Used

Indicate which method will be used to determine phosphorus application:

- ☒ Method A – Representative Soil Sample  
☐ Method B – Phosphorus Index

### Method A – Representative Soil Sample

- Obtain one or more representative soil sample(s) from the field.
- Have the sample analyzed for Phosphorus by a qualified lab. The “Olsen P test” must be used for the analysis, and the result must be reported in parts per million (ppm).
- Using the results of the Olsen P test, determine the application basis according to the Table below

Soil Test	
<i>Olsen P Soil Test Result (ppm)</i>	<i>Application Basis</i>
<25.0	Nitrogen Needs Of Crop
25.1 - 100.0	Phosphorus Needs Of Crop
100.0 - 150.0	Phosphorus Needs up to Crop Removal Rate
>150.0	No Application

### Method B – Phosphorus Index

- Complete a Phosphorus Index according to for each crop grown on each field. Complete table in Appendix A to calculate phosphorus index. For information on filling out specific sections Appendix A, please refer to Attachment 2 of Department Circular DEQ 9.
- Using the calculated Total Phosphorus Index Value, assign the overall site/field vulnerability to phosphorus loss according to the table below.

Total Phosphorus	
<i>Total Phosphorus Index Value</i>	<i>Site Vulnerability to Phosphorus Loss</i>
<11	Low
11-21	Medium
22-43	High
>43	Very High

- Using the calculated Site Vulnerability to Phosphorus Loss, determine the appropriate application basis according to the table below.

Site Vulnerability to Phosphorus Loss	
<i>Site Vulnerability to Phosphorus Loss</i>	<i>Application Basis</i>
Low	Nitrogen Needs
Medium	Nitrogen Needs
High	Phosphorus Need Up to Crop Removal
Very High	Phosphorus Crop Removal or No Application

- d) The permittee will complete the *Nutrient Budget Worksheet*, below, for each crop grown on each field to which manure or process waste water is or may be applied during the first year of application. A copy of each Nutrient Budget Worksheet will be maintained on site, and a copy will be submitted to the Department.

Nutrient Budget Worksheet			
Site/Field: <u>Field 29 153.7 ac - Wheat</u>			
Nutrient Budget		Nitrogen-based Application	Phosphorus-based Application
	Crop Nutrient Needs, lbs/acre included in Department Circular DEQ 9	<u>143 lbs N<sub>2</sub>O<sub>3</sub></u>	
(-)	Credits from previous legume crops, lbs/acre (from DEQ-9), as applicable	<u>49 lbs 0.28"</u>	
(-)	Residuals from past manure production, lbs/acre (lbs/acre applied in previous year(s) x fractions listed in DEQ-9)		
(-)	Nutrients supplied by commercial fertilizer and Biosolids, lbs/acre		
(-)	Nutrients supplied in irrigation water, lbs/acre		
	= <b>Additional Nutrients Needed, lbs/acre</b>	<u>94 lbs N<sub>2</sub>O<sub>3</sub></u>	
	Total Nitrogen and Phosphorus in manure, lbs/ton or lbs/1,000 gal (from manure test)	<u>20.4 lbs/Ton</u>	
(x)	Nutrient Availability factor (for Nitrogen based application see DEQ-9, below; for Phosphorus based application use 1.0)	<u>.6 DEQ 9</u>	
	= <b>Available Nutrients in Manure, lbs/ton or lbs/1,000 gal</b>	<u>12.2 lbs/Ton</u>	
	Additional Nutrients needed, lbs/acre (calculated above)	<u>94 lbs N<sub>2</sub>O<sub>3</sub></u>	
(/)	Available Nutrients in Manure, lbs/ton or lbs/1,000 gal (calculated above)	<u>12.2 lbs/Ton</u>	
	= <b>Manure Application Rate, tons/acre or 1,000 gal/acre</b>	<u>8 Tons/Acre</u>	

Comments:

All manure is applied to wheat or barley - Liquid  
manure can be applied to any field based on analysis.  
Solid manure is only applied to fields with  
Phosphorus level below 25 PPM. No manure is  
applied to Alternative Crops.  
Solid Waste Calculation demonstrated above.

- d) The permittee will complete the *Nutrient Budget Worksheet*, below, for each crop grown on each field to which manure or process waste water is or may be applied during the first year of application. A copy of each Nutrient Budget Worksheet will be maintained on site, and a copy will be submitted to the Department.

Nutrient Budget Worksheet		
Site/Field: <u>Field ④ 100 ac. - Barley</u>		
Nutrient Budget		Nitrogen-based Application
	Crop Nutrient Needs, lbs/acre included in Department Circular DEQ 9	<u>80 lbs N<sub>2</sub></u>
(-)	Credits from previous legume crops, lbs/acre (from DEQ-9), as applicable	<u>33 lbs</u>
(-)	Residuals from past manure production, lbs/acre (lbs/acre applied in previous year(s) x fractions listed in DEQ-9)	
(-)	Nutrients supplied by commercial fertilizer and Biosolids, lbs/acre	<u>43.5 lbs Fert</u>
(-)	Nutrients supplied in irrigation water, lbs/acre	
	= Additional Nutrients Needed, lbs/acre	<u>3.5 lbs N</u>
	Total Nitrogen and Phosphorus in manure, lbs/ton or lbs/1,000 gal (from manure test)	<u>1.7 lbs/1000 gal</u>
(x)	Nutrient Availability factor (for Nitrogen based application see DEQ-9, below; for Phosphorus based application use 1.0)	<u>.6 DEQ 9</u>
	= Available Nutrients in Manure, lbs/ton or lbs/1,000 gal	<u>1 lb/1000</u>
	Additional Nutrients needed, lbs/acre (calculated above)	<u>3.5 lbs</u>
(/)	Available Nutrients in Manure, lbs/ton or lbs/1,000 gal (calculated above)	<u>1 lb/1000 gal</u>
	= Manure Application Rate, tons/acre or 1,000 gal/acre	<u>3500 gal/ac</u>

Comments:

All manure is applied to wheat or Barley - Liquid manure can be applied to any field base on analysis. Solid manure is only applied to fields with Phosphorus levels below 25 ppm. No manure is applied to alternative crops. Liquid waste calculation demonstrated above.

**Section F - CERTIFICATION****Permittee Information:**

This Form NMP must be completed, signed, and certified as follows:

- For a corporation, by a principal officer of at least the level of vice president;
- For a partnership or sole proprietorship, by a general partner or the proprietor, respectively; or
- For a municipality, state, federal, or other public facility, by either a principal executive officer or ranking elected official.

**All Permittees Must Complete the Following Certification:**

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information; including the possibility of fine and imprisonment for knowing violations. [75-5-633, MCA]

**A. Name (Type or Print)**

*John J Waldner*

**B. Title (Type or Print)**

*Sec + Treasurer*

**C. Phone No.**

*1-406-627-2119*

**D. Signature**

*John J Waldner*

**E. Date Signed**

*1-29-09*

Return the Form NMP, Nutrient Management Plan to:

Department of Environmental Quality  
Water Protection Bureau  
PO Box 200901  
Helena, MT 59620-0901  
(406) 444-3080

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PERMITTING & COMPLIANCE DIV.

## INSTRUCTIONS FOR

### Form NMP - Nutrient Management Plan Associated With Concentrated Animal Feeding Operations

**You may need the following items in order to complete this form:** A copy of your most recently submitted Form 2B; a copy of Department Circular DEQ 9, "Montana Technical Standards for Concentrated Animal Feeding Operations;" a copy of soil and manure sample analyses; and a calculator.

Please type or print legibly; forms that are not legible or are not complete will be returned.

#### SPECIFIC ITEM INSTRUCTIONS

##### ***Section A – NMP Status:***

Check the box that applies and provide the requested information. If Form NMP has not been previously submitted for this site, check the first box (New). If you submitted a Form NMP and the Department returned it to you as deficient or incomplete, check the second box (Resubmitted); if you were notified by the Department that the permit coverage expired and you are now submitting an updated Form NMP, check the third box (Renewal); if there is a change in the facility or site information (Section H), check the last box (Modification). If a Form NMP has been submitted and returned as incomplete, then the permit number appears in the upper right hand corner of the form. If the site is covered under the *General Permit for Concentrated Animal Feeding Operations*, the number is given on the Authorization letter sent to you by the Department. The permit number must be included on any correspondence with the Department regarding this site.

##### ***Section B – Facility or Site Information:***

The information must be stated exactly the same way as it was stated on the most recently submitted version of your Form 2B.

##### ***Section C – Applicant (Owner/Operator) Information:***

The information must be stated exactly the same way as it was stated on the most recently submitted version of your Form 2B.

##### ***Section D – Waste Management Minimum Elements:***

***Livestock Statistics:*** Identify each type of animal confined at your facility. The definition of "type" could include animals of a given species, animals of a given weight class (e.g. piglets, sows), or animals housed for a specific purpose (e.g. dry cows, milking cows).

"Number of days on site per year" means the number of days at least one animal of a given type is held in confinement during any 12-month period.

"Annual manure production" means the volume of manure (from a given animal type) that is stored, land applied, or transferred to other persons during any given 12-month period. When describing the method used to calculate annual manure production, include all formulas, factors, references to tables, and other resources used to calculate manure production. Be sure to account for soiled bedding materials and manure-contaminated runoff water, also considered manure under state regulations.

***Manure Removal from Confinement Area,*** list each confinement area at your facility. For example, pens, freestall barns, hog barns, poultry barns, yard back, calving pens, etc.

“Temporary manure storage areas” may include, but are not limited to, structures such as underground tanks and underfloor pits.

List all waste control structures. These may include, but are not limited to, manure lagoons, manure ponds, evaporation ponds, wastewater retention ponds, contaminated runoff retention ponds, settling basins, underground storage tanks, underfloor pits, manure solids stacking pads, composting facilities, and dry-stack facilities. Berms, dikes, concrete curbs, ditches, and waste transfer pipelines are also waste control structures and must be listed, though some of the requested measurements may not apply (e.g. “volume” usually does not apply to a waste transfer pipeline).

*Disposal of Dead Animals*, please be as specific as possible with the information that you provide. For example, if dead animals are disposed of by burial, the method/practice description should include the fact that they are buried, how quickly after death they are hauled to the burial site, and how quickly they are covered with soil. The method/practice location information should be detailed enough that an inspector could find the site without the need for additional guidance. It may not simply reference a map.

*Clean Water Diversion Practices*, the practice description does not need to be any more detailed than “berm,” “ditch,” “grassy swale,” etc. The practice location may not simply reference a map.

*Prohibiting Animals & Wastes from Contact with State Waters*, the practice description does not need to be any more detailed than “fence,” “wall,” etc. The practice location may not simply reference a map.

*Chemicals and Contaminants*, list all major chemicals or other contaminants handled on site as part of your CAFO operation. These would include, but are not be limited to, pesticides, herbicides, animal dips, disinfectants, etc. Specify the method of disposal for each chemical/contaminant.

Describe *Best Management Practices* (BMPs) used to control runoff of pollutants from the production area, and land application area. Please note that “production area” means that part of a CAFO that includes the animal confinement area, the manure storage area, the raw materials storage area, and the waste containment areas. The “animal confinement area” includes but is not limited to open lots, housed lots, feedlots, confinement houses, stall barns, free stall barns, milkrooms, milking centers, cowyards, barnyards, medication pens, walkers, animal walkways, and stables. The “manure storage area” includes but is not limited to lagoons, runoff ponds, storage sheds, stockpiles, under house or pit storages, liquid impoundments, static piles, and composting piles. The “raw materials storage area” includes but is not limited to feed silos, silage bunkers, and bedding materials. The “waste containment area” includes but is not limited to settling basins, and areas within berms and diversions which separate uncontaminated storm water. Also included in the definition of production area is any egg washing or egg processing facility, and any area used in the storage, handling, treatment, or disposal of mortalities.

If you transfer all of the wastes your CAFO produces, and do not land apply any of it to ground under your operational control, then you will not have any land application area BMPs to describe.

### ***Section E – Land Application:***

If all of the manure produced at your facility will be transferred to other persons for use in areas beyond your operational control, then you do not need to provide the information requested in Section E of this form.

### ***Photos and/or Maps:***

Manure/waste handling and nutrient management restrictions that must be on the photo/map include buffers and setbacks around state surface waters, well heads, etc.

*Nutrient Management and Waste Utilization via Land Application:*

The purpose for having two options is to allow you to make use of the valuable technical assistance provided by the USDA's Natural Resources Conservation Service (NRCS), if you should so desire.

**Requirements:** Land application equipment calibration is essential to ensuring that nutrients are being applied at agronomic rates. Section 5 of Department Circular DEQ 9 contains sample instructions on how to calibrate some types of land application equipment. The instructions in Section 5 of Department Circular DEQ 9 are purely recommendations, other methods may work just as well. When sending manure or soil samples to a laboratory for analysis, it is your responsibility to make sure that the lab uses the correct sampling procedures. You should never just "assume" that they will. It is also your responsibility to make sure that the results of the analysis are reported using the appropriate units of measurement. Before you take any samples, talk to the lab that you intend to use. Ask them if they have specific instructions on how to obtain and submit samples. If they do, then you must follow their instructions in order to help ensure that the analysis results you get are as accurate as possible.

You will most likely need to make and fill out multiple photocopies of "Table 4 – Crops and Manure". For information on how to fill out specific sections of Table 6 – Phosphorus Index, please refer to Attachment 2 of Department Circular DEQ 9.

"Table 9 – Nutrient Budget Worksheet" must be filled out for each crop grown on each field to which manure or process wastewater will or may be applied, regardless of whether Method A has been used or Method B has been used. When filling out Table 9, be sure and refer to nitrogen in terms of pounds of elemental nitrogen. Phosphorus should be referred to in pounds of  $P_2O_5$ .

**Section F – Certification:**

If Form NMP is filled out by one person and signed by another, the person signing the document should read it thoroughly. Always retain a copy of each of the documents that you send to the Department.

If you have any questions concerning how to fill out this form, or other forms related to the Montana Pollutant Discharge Elimination System (MPDES) discharge permitting program, please contact the Department's Water Protection Bureau at:

Phone: (406) 444-3080  
Fax: (406) 444-1374  
1520 East Sixth Avenue  
P.O. Box 200901  
Helena, MT 59620-0901

# Appendix A: Phosphorus Index Worksheet (Complete for each field or crop)

Site/Field:								
Site Category Factor	None (0)	Low (1)	Medium (2)	High (4)	Very High (8)	Risk Value (0, 1, 2, 4, 8)	Weight Factor	Weighted Risk
Soil Erosion	N/A	<5 tons/ac/yr	5-10 ton/ac/yr	10-15 tons/ac/yr	>15 tons/ac/yr		X 1.5	
Furrow Irrigation Erosion	N/A	Tailwater recovery, QS>6 very erodible soils, or QS>10 other soils	QS>10 for erosion resistant soils	QS>10 for erodible soils	QA>6 for very erodible soils		X 1.5	
Sprinkler Irrigation Erosion	All sites 0-3% slope, all sandy sites, or site evaluation indicates little or no runoff, large spray on silts 3-8%	Medium spray on silty soils 3-15% slopes, large spray on silty soils 8-15% slope, low spray on silt soils 3-8%, large spray on clay soil 3-15% slope	Medium spray on clay soils 3-8% slopes, large spray on clay soils >15% slope, medium spray on silt soil >15% slope	Medium spray on clay soils >8% slope, low spray on clay soil 3-8% slope, low spray on silty soils >15% slopes	Low spray on clay soils >8% slopes		X 0.5	
Runoff Class	Negligible	Very Low or Low	Medium	High	Very High		X 0.5	
Olson Soil Test P	-----	<20 ppm	20-40 ppm	40-80 ppm	>80 ppm		X 1.0	
Commercial P Fertilizer Application Method	None Applied	Placed with planter or injected deeper than 2 inches	Incorporated <3 months prior to planting or surface applied during the growing season	Incorporated >3 months before crop or surface applied <3 months before crop emerges	Surface applied >3 months before crop emerges		X 1.0	
Commercial P Fertilizer Application Rate	None Applied	<30 lbs/ac P2O5	31-90 lbs/ac P2O5	91-150 lbs/ac P2O5	>150 lbs/ac P2O5		X 1.0	
Organic P Source Application Method	None Applied	Injected deeper than 2 inches	Incorporated <3 months prior to planting or surface applied during growing season.	Incorporated >3 months before crop or surface applied <3 months before crop.	Surface applied to pasture or >3 months before crop emerges.		X 1.0	
Organic P Application Rate	None Applied	<30 lbs/ac P2O5	31-90 lbs/ac P2O5	91-150 lbs/ac P2O5	>150 lbs/ac P2O5		X 1.0	
Distance to Concentrated Surface Water Flow	>1,000 feet	200-1,000 feet, or functioning grass waterways in concentrated surface water	100-200 feet	<100 feet	0 feet or applications are directly into concentrated surface water flow areas.		X 1.0	
<b>Total Phosphorus Index Value:</b>								

## Camrose Colony

Volume and Capacity for Primary and Secondary Ag Lagoons

### *Primary*    1st Stage Lagoon

	<u>Width</u>	<u>Length</u>	<u>Slope</u>
<b>Bottom</b>	20	20	3 to 1

<u>Height (feet)</u>	<u>Square Feet</u>		<u>Volume</u>		<u>Top (feet)</u>		<u>Cu. Yd</u>	<u>Acres</u>
	<u>Base</u>	<u>Top</u>	<u>Cu. Ft.</u>	<u>Gallons</u>	<u>Width</u>	<u>Length</u>		
1	400	676	532	3,979	26	26	20	0.01
2	400	1,024	1,376	10,292	32	32	51	0.03
3	400	1,444	2,604	19,478	38	38	96	0.06
4	400	1,936	4,288	32,074	44	44	159	0.10
5	400	2,500	6,500	48,620	50	50	241	0.15
6	400	3,136	9,312	69,654	56	56	345	0.21
7	400	3,844	12,796	95,714	62	62	474	0.29
8	400	4,624	17,024	127,340	68	68	631	0.39
9	400	5,476	22,068	165,069	74	74	817	0.51
10	400	6,400	28,000	209,440	80	80	1,037	0.64
11	400	7,396	34,892	260,992	86	86	1,292	0.80
12	400	8,464	42,816	320,264	92	92	1,586	0.98
13	400	9,604	51,844	387,793	98	98	1,920	1.19
14	400	10,816	62,048	464,119	104	104	2,298	1.42
15	400	12,100	73,500	549,780	110	110	2,722	1.69
16	400	13,456	86,272	645,315	116	116	3,195	1.98
17	400	14,884	100,436	751,261	122	122	3,720	2.31
<b>18</b>	<b>400</b>	<b>16,384</b>	<b>116,064</b>	<b>868,159</b>	<b>128</b>	<b>128</b>	<b>4,299</b>	<b>2.66</b>
19	400	17,956	133,228	996,545	134	134	4,934	3.06
20	400	19,600	152,000	1,136,960	140	140	5,630	3.49

### *Secondary*    2nd Stage Lagoon

	<u>Width</u>	<u>Length</u>	<u>Slope</u>
<b>Bottom</b>	150	300	3 to 1

<u>Height (feet)</u>	<u>Square Feet</u>		<u>Volume</u>		<u>Top (feet)</u>		<u>Cu. Yd</u>	<u>Acres</u>
	<u>Base</u>	<u>Top</u>	<u>Cu. Ft.</u>	<u>Gallons</u>	<u>Width</u>	<u>Length</u>		
1	45000	47,736	46,361	346,782	156	306	1,717	1.06
2	45000	50,544	95,490	714,268	162	312	3,537	2.19
3	45000	53,424	147,455	1,102,967	168	318	5,461	3.38
4	45000	56,376	202,325	1,513,392	174	324	7,494	4.64
5	45000	59,400	260,168	1,946,060	180	330	9,636	5.97
6	45000	62,496	321,055	2,401,489	186	336	11,891	7.37
7	45000	65,664	385,053	2,880,198	192	342	14,261	8.84
<b>8</b>	<b>45000</b>	<b>68,904</b>	<b>452,234</b>	<b>3,382,710</b>	<b>198</b>	<b>348</b>	<b>16,749</b>	<b>10.38</b>
9	45000	72,216	522,667	3,909,549	204	354	19,358	12.00
10	45000	75,600	596,422	4,461,238	210	360	22,090	13.69

Volume= 1/3 H(B+b+(Sq.RtB\*b))



## LABORATORY ANALYTICAL REPORT

Client: Camrose Colony  
Lab ID: B070100374-002  
Client Sample ID: Dry Stock Manure

Report Date: 10/15/07  
Collection Date: 10/02/07  
Date Received: 10/03/07

### Manure Testing - CNMP Manure Package

<u>Analyte</u>	<u>Dry Basis</u> <u>mg/kg</u>	<u>----- As Received Moisture Basis -----</u>		
		<u>Percent</u>	<u>mg/kg</u>	<u>pounds/ton</u>
Moisture	0.0	41.6		
Solids	100.0	58.4		
Total Kjeldahl Nitrogen	17,400	1.02	10,162	20.3
Nitrate as N	39	0.00	23	0.0
Nitrogen, Total as N	17,439	1.02	10,184	20.4
Phosphorus, Total as P	7,630	0.45	4,456	8.9
Phosphorus, as P <sub>2</sub> O <sub>5</sub>	17,473	1.02	10,204	20.4
Potassium, Total as K	26,400	1.54	15,418	30.8
Potassium, as K <sub>2</sub> O	31,680	1.85	18,501	37.0

#### NOTES:

To adjust to a different moisture, divide the current value by the percent dry matter (expressed as a decimal), then multiply by the desired percent dry matter (also expressed in a decimal). For example, total nitrogen was 80 pounds per ton at 50% moisture and the usual spreading moisture is 45%, 80 divided by 0.50 = 160 pounds of total nitrogen per dry ton of manure. Then multiply 160 x 0.55 (% DM) = 88 total pounds of nitrogen per ton at 45% moisture.

For liquid or semi-liquid manure slurry you can calculate pounds per 1000 gallons by multiplying the pounds/ton concentration by 4.

mg/kg = ppm



## LABORATORY ANALYTICAL REPORT

Client: Camrose Colony  
Lab ID: B08110351-001  
Client Sample ID: 2nd Stage Ag Lagoon

Report Date: 11/18/08  
Collection Date: 11/04/08  
Date Received: 11/05/08

### Manure Testing - CNMP Manure Package

Analyte	Dry Basis mg/kg	As Received Moisture Basis			
		Percent	mg/kg	pounds/ton	pounds/1000 gallons
Moisture	0.0	94.0			
Solids	100.0	6.0			
Total Kjeldahl Nitrogen	3,590	0.02	215	0.4	1.7
Nitrate as N	4	0.00	0	0.0	0.0
Nitrogen, Total as N	3,594	0.02	216	0.4	1.7
Phosphorus, Total as P	809	0.00	49	0.1	0.4
Phosphorus, as P <sub>2</sub> O <sub>5</sub>	1,853	0.01	111	0.2	0.9
Potassium, Total as K	3,340	0.02	200	0.4	1.6
Potassium, as K <sub>2</sub> O	4,008	0.02	240	0.5	1.9

#### NOTES:

To adjust to a different moisture, divide the current value by the percent dry matter (expressed as a decimal), then multiply by the desired percent dry matter (also expressed in a decimal). For example, total nitrogen was 80 pounds per ton at 50% moisture and the usual spreading moisture is 45%, 80 divided by 0.50 = 160 pounds of total nitrogen per dry ton of manure. Then multiply 160 x 0.55 (% DM) = 88 total pounds of nitrogen per ton at 45% moisture.

For liquid or semi-liquid manure slurry you can calculate pounds per 1000 gallons by multiplying the pounds/ton concentration by 4.

mg/kg = ppm



P.O. BOX 510, NORTHWOOD, ND 58267  
(701) 587-6010

# SOIL TEST REPORT

FIELD 4  
COUNTY TIOLE  
TWP 30N-1E  
QTR  
PREV CROP  
SAMPLE  
SECTION 34  
ACRES 181.5

W

N

S

## SUBMITTED FOR:

CAMROSE COLONY  
26 CAMROSE LANE  
HC74 BOX 18  
LEDGER, MT

59456

## SUBMITTED BY:

C04716

CAMROSE COLONY  
26 CAMROSE LANE  
HC74 BOX 18  
LEDGER, MT

59456

REF # 10298714

LAB # 149145

BOX #

DATE SAMPLED 10/22/08

DATE RECEIVED 12/10/08

DATE REPORTED 12/11/08

## NUTRIENT IN THE SOIL

24 lb/ac  
39 lb/ac  
63 lb/ac

13 ppm

297 ppm

36 lb/ac

14 lb/ac

144 lb/ac

0.89 ppm

2.0 %

0.29 mmho/cm

0.36 mmho/cm

## INTERPRETATION

V LOW LOW MED HIGH

## 1ST CROP CHOICE

MALTING BARLEY

YIELD  
GOAL 65 BU

BROADCAST/BUILD

N 38

P<sub>2</sub>O<sub>5</sub> 35 Broadcast

K<sub>2</sub>O 10 Band(Starter)\*

Cl 4 Broadcast

S 0

B

Zn

Fe

Mn

Cu

Mg

Lime 0.0

## 2ND CROP CHOICE

YIELD  
GOAL

SUGGESTED GUIDELINES

LB/ACRE APPLICATION

N

P<sub>2</sub>O<sub>5</sub>

K<sub>2</sub>O

Cl

S

B

Zn

Fe

Mn

Cu

Mg

Lime

## 3RD CROP CHOICE

YIELD  
GOAL

SUGGESTED GUIDELINES

LB/ACRE APPL

N

P<sub>2</sub>O<sub>5</sub>

K<sub>2</sub>O

Cl

S

B

Zn

Fe

Mn

Cu

Mg

Lime

pH	Soil pH	Cation Exchange Capacity	% Base Saturation (Typical) Range			
			% Ca	% Mg	% K	% Na
7.8						

8 LBS OF 0-0-60 = 4 LBS OF CHLORIDE

\* CAUTION: SEED PLACED FERTILIZER CAN CAUSE INJURY \*



P.O. BOX 510, NORTHWOOD, ND 58267  
(701) 587-6010

Field 24

## SOIL TEST REPORT

FIELD 1A SAMPLE HENKE  
COUNTY TOOLE  
TWP 29N 1E SECTION 4  
QTR ACRES 153.2  
PREV CROP MALTING BARLEY

W

N

S

### SUBMITTED FOR:

CANROSE COLONY  
26 CANROSE LANE  
HC74 BOX 18  
LEDGER, MT

59456

### SUBMITTED BY:

CD4716

CANROSE COLONY  
26 CANROSE LANE  
HC74 BOX 18  
LEDGER, MT

59456

REF # 10535446  
LAB # 44000

BOX #

DATE SAMPLED 8/25/08

DATE RECEIVED 9/ 5/08

DATE REPORTED 9/ 5/08

### NUTRIENT IN THE SOIL

16 lb/ac  
33 lb/ac  
49 lb/ac

21 ppm

285 ppm

88 lb/ac

30 lb/ac  
360+ lb/ac

1.13 ppm

0.40 mmo/cu

1.28 mmo/cu

### INTERPRETATION

V. LOW LOW MED HIGH

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### 1ST CROP CHOICE

#### WINTER WHEAT

YIELD  
GOAL 55 BU

#### BROADCAST/BUILD

N	83	
P2O5	15	Band(Starter)*
K2O	10	Band(Starter)*
Cl	0	
S	0	
B		
Zn		
Fe		
Mn		
Cu	0	
Mg		
Lime	0.0	

### 2ND CROP CHOICE

YIELD  
GOAL

N

P2O5

K2O

Cl

S

B

Zn

Fe

Mn

Cu

Mg

Lime

### 3RD CROP CHOICE

YIELD  
GOAL

N

P2O5

K2O

Cl

S

B

Zn

Fe

Mn

Cu

Mg

Lime

7.6

\* CAUTION: SEED PLACED FERTILIZER CAN CAUSE INJURY \*

Crop Removal: Crop 1: P2O5= 34 K2O= 21

AGVISE Broadcast guidelines will build P & K test levels to the high range over several years.

N



Sheet  
of

Drawing No.

File Name



**PLAN VIEW  
ANIMAL WASTE FACILITY  
CAMROSE COLONY**

Date \_\_\_\_\_

Designed \_\_\_\_\_

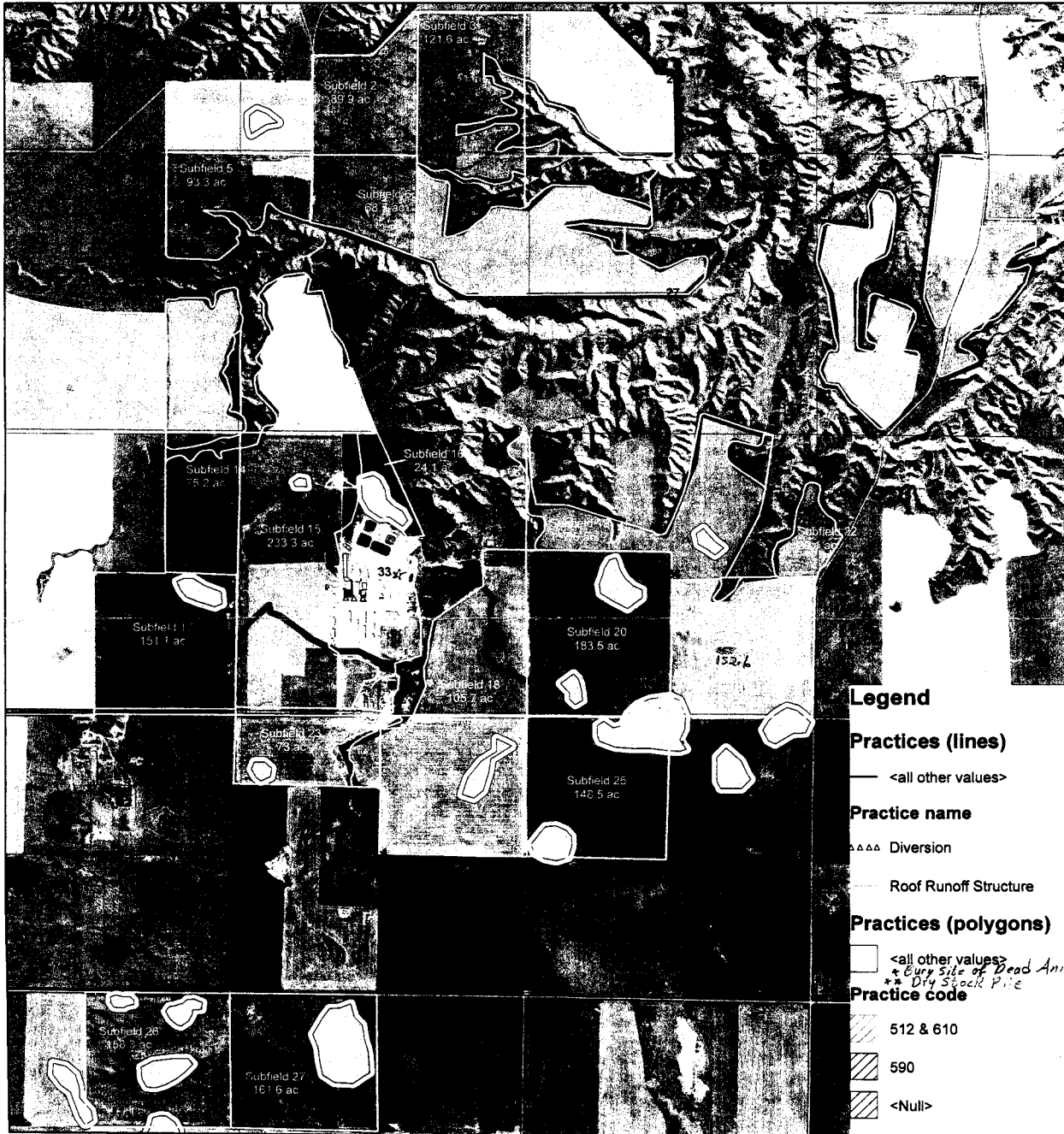
Drawn \_\_\_\_\_

Checked \_\_\_\_\_

Approved \_\_\_\_\_

# Plan Map

Customer(s): CAMROSE COLONY INC



## Legend

### Practices (lines)

<all other values>

### Practice name

Diversion

Roof Runoff Structure

### Practices (polygons)

<all other values>

Bury Site of Dead Animals

Bury Stock Pile

### Practice code

512 & 610

590

<Null>

07CAFO\_appl

Buffer\_Wetland\_Output.shp

Buffer\_Line\_Output.shp

Res Inv Wetland (Polygon)

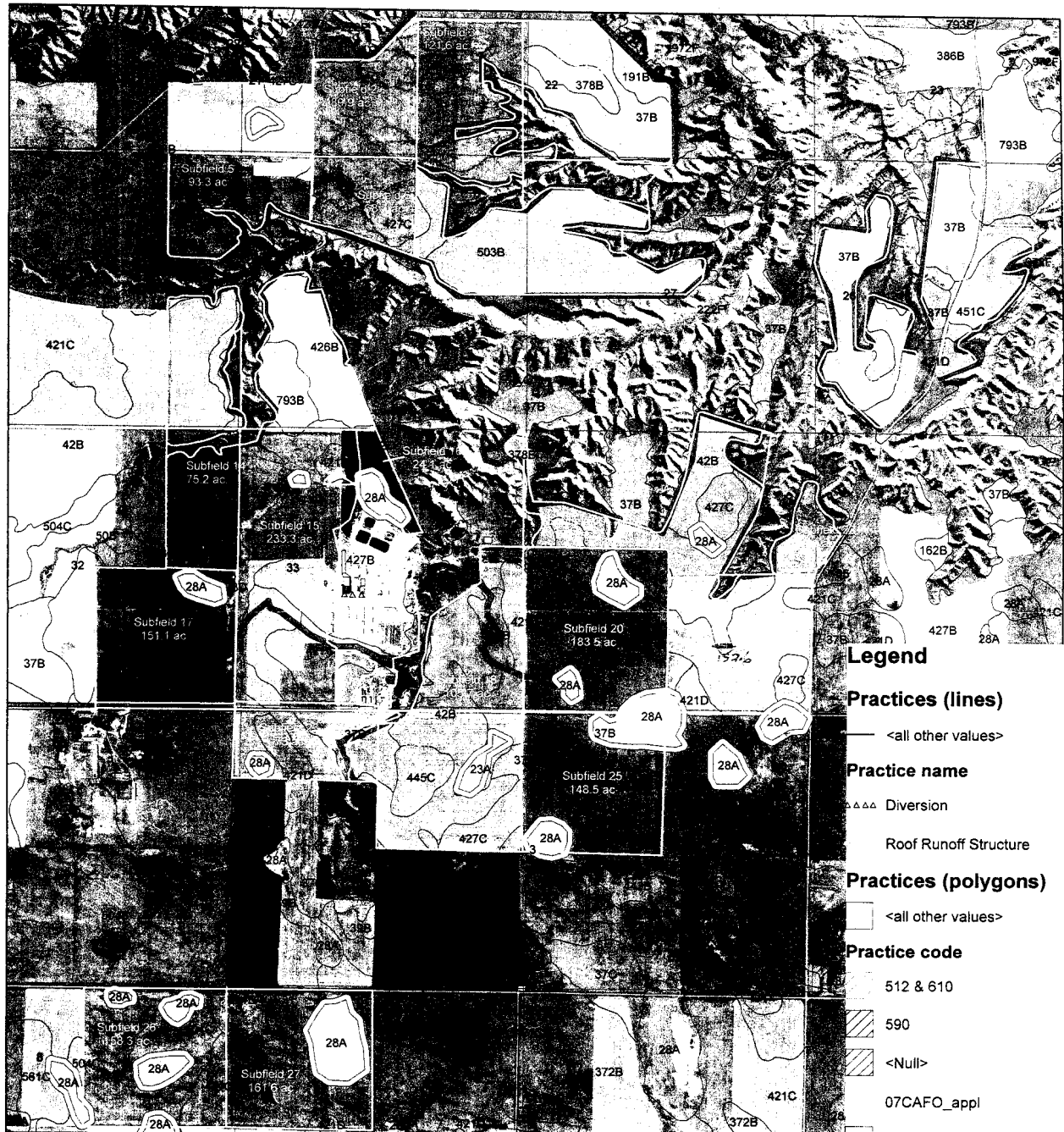
plss\_a\_mt101



Jan 09

# Soils/ Plan Map

Customer(s): CAMROSE COLONY INC



## Legend

### Practices (lines)

<all other values>

### Practice name

Diversion

Roof Runoff Structure

### Practices (polygons)

<all other values>

### Practice code

512 & 610

590

<Null>

07CAFO\_appl

Buffer\_Wetland\_Output.shp

Buffer\_Line\_Output.shp

Res Inv Wetland (Polygon)

plss\_a\_mt101

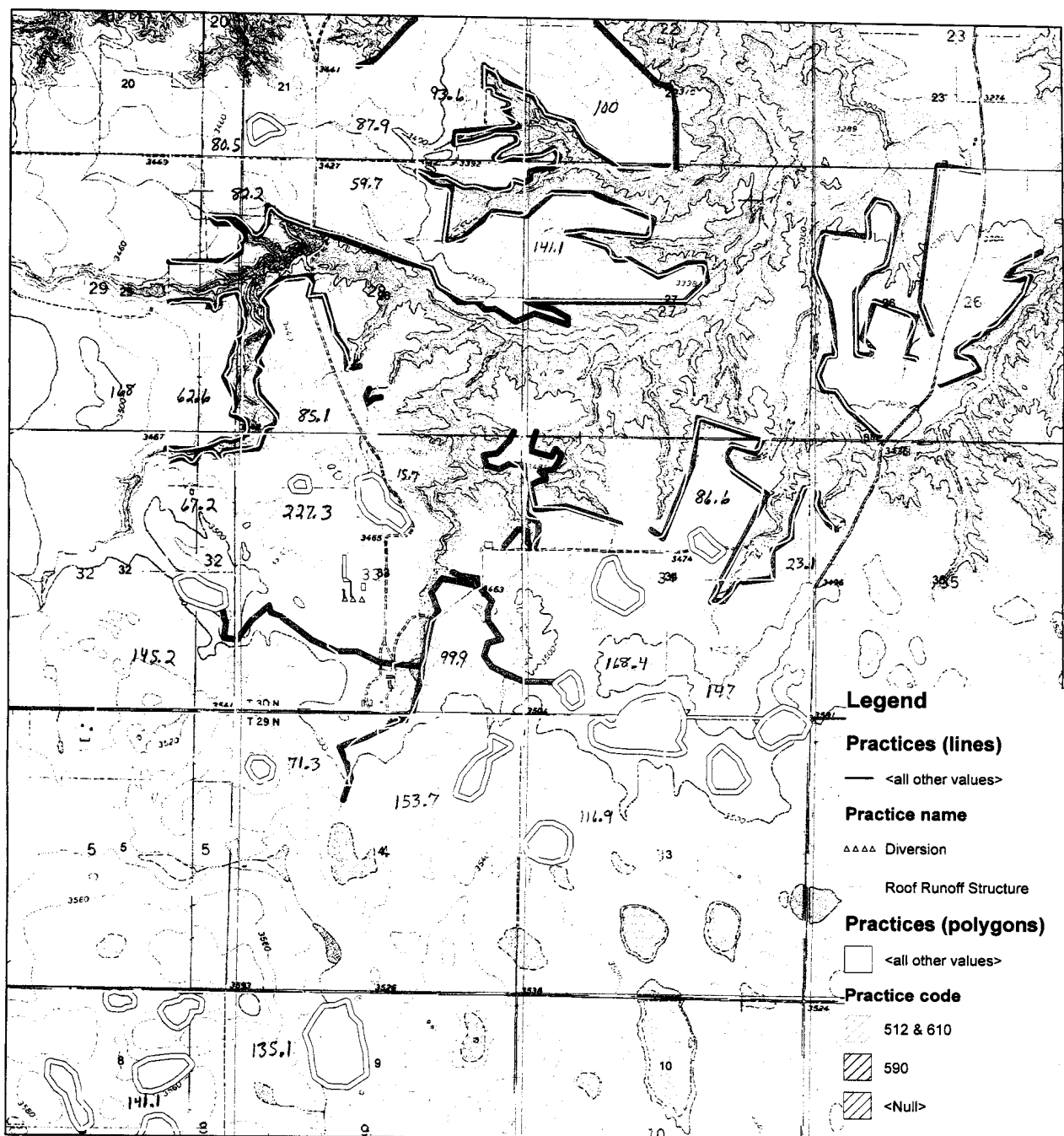
soil\_a\_mt101



## TOPO Map

Customer(s): CAMROSE COLONY INC

Write in Spreadable Acres



### Legend

### Practices (lines)

— <all other values>

**Practice name**

△△△△ Diversion

### Roof Runoff Structure

## Practices (polygons)

☐ <all other values>

Practice code

512 &amp; 610

590

 **<Null>**

07CAFO\_appl

☐ Buffer\_Wetland\_Output.shp

 Buffer\_Line\_Output.shp

 Res Inv Wetland (Polygon)

plss\_a\_mt101

15.8 spreadable acre

